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A Novel Link Prediction Method in Social Networks Based-on Gravitational Search Algorithm

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ABSTRACT

In this paper we present a novel distributed link prediction method for social networks that is scalable and using structural properties of the network for its predictions without need to any profile. This is an agent-oriented modeling which doing good community detection and using the gravitational search algorithm to select candidate links between communities. The experimental results of prediction on various data sets show that the proposed method is scalable with on average 69% precision and 68% accuracy. Also, better scalability with improvement in speed, precision and accuracy has been reported by selecting an appropriate or optimize CPU allocation.

Keywords: Link Prediction, Gravitational Search Algorithm (GSA), Social Networks, Agent-Oriented, Distributed Model.